

Market Mechanisms for Airspace Flow Program Slots, Phase I

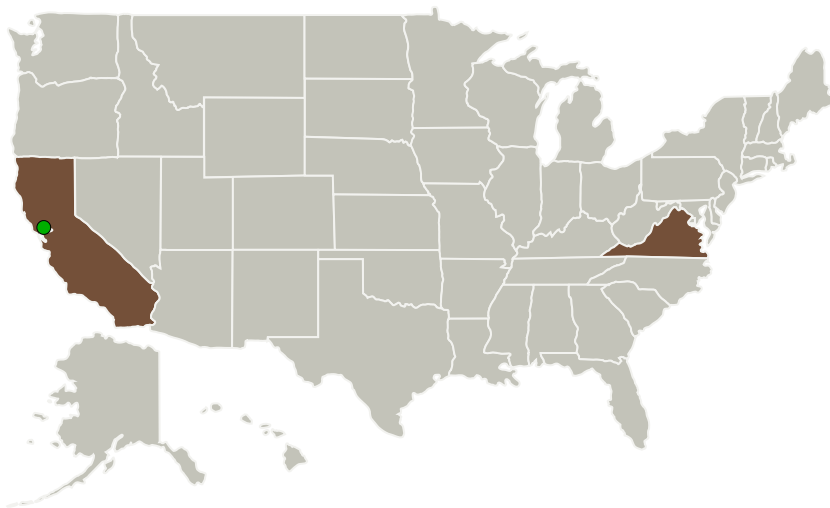
Completed Technology Project (2010 - 2010)



Project Introduction

We propose to design a system to support a marketplace in which flight operators can exchange arrival slots in traffic flow management (TFM) initiatives such as airspace flow programs (AFPs) and ground delay programs (GDPs) while requiring no changes in FAA automation or procedures. The advent of AFPs in 2006 has generated many more potentially exchangeable resources that would be valued sufficiently differently by their owners to make a trade desirable. We believe that NAS users and the FAA would embrace such a marketplace and that it would enable users to collectively reduce their operating costs resulting from NAS congestion. Both FAA and NASA research has highlighted the need for efficient and equitable allocation of NAS resources and increased operational flexibility. In the past market-based mechanisms have been suggested for transferring system-imposed delay from more critical to less critical flights. No such capability is available to NAS users today. In this SBIR, we will show how the advent of AFPs changes the forces at work in a slot-trading marketplace, making its functions much more valuable to flight operators. We will also design a system that will provide the aviation community with a means of reducing operating costs and increasing effective throughput by trading scarce NAS resources.

Primary U.S. Work Locations and Key Partners



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Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Project Transitions	2
Organizational Responsibility	2
Project Management	2
Technology Maturity (TRL)	2
Technology Areas	3
Target Destinations	3

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Organizations Performing Work	Role	Type	Location
Metron Aviation, Inc.	Lead Organization	Industry	Dulles, Virginia
● Ames Research Center(ARC)	Supporting Organization	NASA Center	Moffett Field, California

Primary U.S. Work Locations	
California	Virginia

Project Transitions

**January 2010:** Project Start**July 2010:** Closed out**Closeout Documentation:**

- Final Summary Chart(<https://techport.nasa.gov/file/139951>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Metron Aviation, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

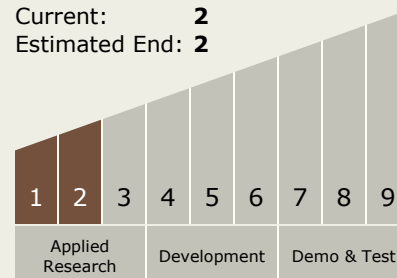
Carlos Torrez

Principal Investigator:

Michael Brennan

Technology Maturity (TRL)

Start: **1**
 Current: **2**
 Estimated End: **2**



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Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
 - └ TX16.3 Traffic Management Concepts

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System